

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION

JG Technologies LLC,

Plaintiff,

v.

Volvo Car USA LLC,

Defendant.

CIVIL ACTION

NO. 2:20-cv-175

**Jury Trial Demanded**

**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff JG Technologies LLC (“Plaintiff” or “JGT”) files this Complaint under for Patent Infringement against Defendant, and states as follows:

**THE PARTIES**

1. Plaintiff is a limited liability company organized and existing under the laws of the State of Alabama, having its principal office at 1592 SouthPointe Drive, Hoover, AL 35244.

2. Defendant Volvo Car USA LLC (“Defendant”) is a limited liability company organized and existing under the laws of the State of Delaware with a principal place of business at 1 Volvo Drive, Bldg. B, Rockleigh, NJ 07647. Defendant may be served with process through its registered agent, CT Corporation System, 1999 Bryan St., Ste. 900, Dallas, TX 75201-3136.

**JURISDICTION AND VENUE**

3. This Court has exclusive subject matter jurisdiction over this case pursuant to 28 U.S.C. §§ 1331 and 1338(a) on the grounds that this action arises under the Patent

Laws of the United States, 35 U.S.C. § 1 et seq., including, without limitation, 35 U.S.C. §§ 271, 281, 284, and 285.

4. This Court has personal jurisdiction over Defendant because Defendant has minimum contacts with the State of Texas and has purposefully availed itself of the privileges of conducting business in the State of Texas. For example, on information and belief, Defendant has sold or offered to sell infringing products in the State of Texas and this Judicial District, or has manufactured accused vehicles and provided them to intermediaries for distribution throughout the country, including Texas and this judicial district, with knowledge of this distribution.

5. Venue is proper in this Court pursuant to 28 U.S.C. § 1400(b) on the grounds that Defendant has committed acts of infringement in and has a regular and established place of business in this Judicial District. For example, upon information and belief, (a) Defendant conducts its business of the exclusive distribution of new automobiles to the consuming public in this District through authorized dealers in this District, which Defendant holds out to the public as its own (including, for example, Crest Volvo Cars, 2701 North Central Expressway, Plano, TX 75075); and (b) Defendant conducts its business of the provision of new purchase warranties and service pursuant to those warranties to the consuming public in this District through its authorized dealership(s) located in this District.

#### **FACTUAL BACKGROUND**

6. Plaintiff JGT is the owner by assignment of all right, title, and interest in and to United States Patent No. 7,952,511, entitled “Method and Apparatus for the Detection of Objects Using Electromagnetic Wave Attenuation Patterns” (“the ’511 patent”), including the right to sue for all past, present, and future infringement, which

assignment was duly recorded in the United States Patent and Trademark Office (“USPTO”).

7. James L. Geer, the sole inventor of the ’511 patent, is a member of JG Technologies.

8. A true and correct copy of the ’511 patent is attached hereto as Exhibit A. The ’511 patent is incorporated herein by reference.

9. The application that became the ’511 patent was filed on April 7, 2000, and was assigned U.S. Patent Application Number 09/545,407 (“the ’407 Application”).

10. The ’407 Application claims priority to U.S. Provisional Application No. 60/128,233, filed April 7, 1999.

11. The ’511 patent issued on May 31, 2011, after a full and fair examination by the United States Patent and Trademark Office.

12. The ’511 patent is valid and enforceable and directed to eligible subject matter.

#### **SUBJECT MATTER OF THE ’511 PATENT**

13. The ’511 patent discloses and claims inventions relating to the detection of objects using electromagnetic wave attenuation patterns.

14. For example, the ’511 patent discloses techniques for detecting enemy aircraft, particularly stealth aircraft. As the ’511 patent recounts, “[r]adar was developed in World War II to detect enemy aircraft. It has subsequently been refined to detect a large variety of objects, including ships, helicopters, satellites, and land vehicles.” ’511 patent at 1:8-11. Such “[r]adar systems typically work on the principle of bouncing microwave radiation off an object and analyzing the reflected signal (echo).” *Id.* at 11-13.

15. However, “[o]nce Radar saw widespread use, military planners saw the military advantage that would accrue from having craft that are invisible to Radar. After decades of research and development, the United States began deployment of so called stealth aircraft in the 1980’s,” technology that could be and in some cases by that point had already been applied to other objects, such as ships, satellites, and land vehicles. *Id.* at 1:33-37. As the ’511 patent describes, various techniques are used, often in combination, to absorb, scatter, or diffuse electromagnetic radiation. *Id.* at 1:1-64.

16. By the time the ’407 application was filed, the United States no longer had a monopoly on stealth craft. Stealth technology had been deployed by several countries and was expected to become available to even more countries, including some hostile to the United States. *Id.* at 1:65-2:4. Thus, the inventor of the ’511 patent recognized that “it is becoming increasing[ly] important for any military to be able to detect stealth craft.” *Id.* at 2:5-6.

17. The ’511 patent addresses technological deficiencies in existing object-detection systems, thereby providing improved techniques for detecting various objects, including, for example, aircraft, missiles, satellites, drones, ships, boats, submarines, tanks, trucks, and cars. *Id.* at 2:25-35.

18. For example, the ’511 patent states that its solution differed from security-system technologies such as beam-interruption sensors. *Id.* at 2:43-45. Unlike those technologies, the ’511 patent “does not seek to provide a narrow beam that is fully blocked by the object to be detected.” Rather, the ’511 patent discloses embodiments

“provid[ing] a region of detection significantly larger than a ‘line of sight.’” *Id.* at 49-51.

19. Thus, unlike traditional systems in which “off axis sensitivity is extremely limited by design,” the ’511 patent discloses embodiments in which “a large volume of space may be monitored by a detector node . . . in contrast to known shadow detectors.” *Id.* at 2:51-57.

20. In this way, the design principles of stealth aircraft, such as seeking to absorb microwave radiation, actually increase contrast between the craft and the background, thereby increasing visibility when technological solutions disclosed and claimed in the ’511 patent are employed. *Id.* at 2:36-41.

21. The ’511 patent also recognizes the need to not only detect an object but to recognize it. Thus, the ’511 patent discloses technological solutions to this problem as well. For example, the ’511 patent discloses providing “a computer reference file for the aircraft dimensions of the particular Stealth Craft suspected of detection.” *Id.* at 8:53-54. The ’511 patent also discloses using other characteristics, such as maximum velocity or radar signature characteristics to resolve ambiguities regarding the object suspected of detection. *Id.* at 8:54-55.

22. The claims of the ’511 patent address technological deficiencies of the prior art such as those described above by reciting technical solutions to technical problems. For example, claim 1 of the ’511 patent recites:

1. A method for detecting an object, comprising the steps of:

defining expected characteristics of a scattered invisible electromagnetic radiation pattern to be detected at a receiver;

attenuating at least a portion of an invisible electromagnetic radiation field by a presence of an object within a path of invisible electromagnetic radiation, said invisible

electromagnetic radiation propagating off axis with respect to the receiver toward a scattering medium; and

detecting the attenuation to indicate a presence of the object.

23. The invention recited in claim 1 addresses technical deficiencies in the state of the art. For example, it recites “defining expected characteristics of a scattered invisible electromagnetic radiation pattern to be detected at a receiver,” “attenuating at least a portion of an invisible electromagnetic radiation field by a presence of an object within a path of invisible electromagnetic radiation, said invisible electromagnetic radiation propagating off axis with respect to the receiver toward a scattering medium,” and “detecting the attenuation to indicate a presence of the object.” This overcomes a deficiency in prior solutions that provided a narrow beam and sought to detect when the beam was fully blocked. Such technologies “were extremely limited by design” with respect to off-axis sensitivity. In contrast, claim 1 recites “said invisible electromagnetic radiation propagating off axis with respect to the receiver toward a scattering medium,” thereby permitting coverage of a much larger area than the cross-section of the object to be detected.

24. The claim elements recited in claim 1 were not well-understood, routine, or conventional when the inventor of the ’511 patent filed his patent application.

25. The subject matter disclosed and claimed in the ’511 patent provides solutions to other deficiencies in the art as well.

26. Claim 15 recites: “An apparatus for performing the method of claim 1, comprising: means for storing expected characteristics of scattered electromagnetic radiation to be received at a receiver; and a receiver for detecting the attenuation to indicate a presence of the object.”

27. Claim 15 address a technological problem regarding how to identify detected objects to determine, for example, whether they pose a risk. This allows, for example, a pedestrian to be identified based on stored characteristics of pedestrians.

28. The claim elements recited in claim 15 were not well-understood, routine, or conventional when the inventor of the '511 patent filed his patent application.

### **COUNT I – INFRINGEMENT OF THE '511 PATENT**

29. Plaintiff realleges and incorporates by reference the allegations set forth above, as if set forth verbatim herein.

30. Defendant has been and is now making, using, selling, offering for sale, and/or importing products that incorporate one or more of the inventions claimed in the '511 patent.

31. For example, Defendant infringes at least claims 1 and 15 of the '511 patent, either literally or under the doctrine of equivalents, in connection with Defendant's vehicles equipped with cyclist detection, pedestrian detection, or large animal detection technologies, as detailed in the preliminary claim chart attached hereto as Exhibit B and incorporated herein by reference.

32. Defendant's infringing activities are and have been without authority or license under the '511 patent.

33. Plaintiff has been, and continues to be, damaged by Defendant's infringement of the '511 patent, and Plaintiff is entitled to recover damages for Defendant's infringement, which damages cannot be less than a reasonable royalty.

34. Prior to filing this action, Plaintiff specifically notified Defendant in writing of Defendant's infringement of the '511 patent.

35. Defendant has continued to infringe the '511 patent despite this notice and despite Defendant having actual knowledge of the '511 patent at least since Defendant received such notice, and Defendant's infringement has therefore been willful.

36. Based at least on Defendant's willful infringement, this case should be declared exceptional, and Plaintiff should be awarded its costs, attorney's fees, and both pre- and post-judgment interest.

**JURY DEMAND**

Plaintiff demands a trial by jury of all issues so triable.

**PRAYER FOR RELIEF**

Plaintiff respectfully requests that the Court find in its favor and against Defendant, and that the Court grant Plaintiff the following relief:

- A. Entry of judgment that Defendant has infringed one or more claims of the '511 patent, and that this infringement has been willful,
- B. Damages in an amount to be determined at trial for Defendant's infringement, which amount cannot be less than a reasonable royalty,
- C. Entry of judgment that this case is exceptional and that Plaintiff be awarded all of its costs, expenses, and attorney's fees incurred in connection with this action,
- D. Pre-judgment and post-judgment interest on the damages assessed, and
- E. Such other and further relief, both at law and in equity, to which Plaintiffs may be entitled and which the Court deems just and proper.

This 31<sup>st</sup> day of May, 2020.



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